Is it one Nile? Civic engagement and hydropolitics in the Eastern Nile Basin: the case of Egypt, Sudan and Ethiopia

Abazeed, A.R.Y.

Chapter Three

Theoretical Framework

3.1 Introduction

This chapter examines how some international relations theories address cooperation as an inevitable policy option for states to maintain self-interests in transboundary water resource management challenges. It unravels the complexity and uncertainty confronting the assumptions of national interests within the power structures underlined in the classical theoretical strands oscillating between cooperation and conflict or between state and non-state actors. This plethora of relations induces us to adapt the lens of analysis and espouse a relational perspective where power is in motion across different categories of actors, and their interests are networked.

This chapter demonstrates, firstly, how scholars of classical international relations theories have underpinned the necessity of collective action to mitigate transboundary environmental challenges. Secondly, it demonstrates the anticipation of relational thinking through the premise of the complexity notion in international relations. And, thirdly, it elucidates the main premises of power relations in the network approach as an under-theorized aspect of hydropolitics.

3.2 International relations theories and collective action

Managing water challenges has been globally approached from the lens of sustainability and the environment (Duda and El-Ashry, 2000). Alongside this, international relations theories acknowledge that cooperation is a required behaviour of states to encounter environmental crises that entail water impediments. However, two main classical theories in international relations, realism and liberalism, approach environmental challenges from the perspective of power structures in the international system. Furthermore, they entail a debate about interpreting motives and impediments to cooperation under global challenges.

By comparison, the arguments of non-positivist theories are based on normative views. The Marxist and Gramscian approaches, for example, contend that facing global environmental challenges is to attain human prosperity in terms of liberation from the dominating structure. In other words, people's culture and social settings have been threatened by the power structures of states and markets; therefore, these strands of theories propose alternative settings based on norms of equity and justice (Cox, 1981:129; Manuel-Navarrete, 2010:783-784). The constructivist view assumes that environment protection is one of the norms that developed in international politics driven by idealist motives. 'Reality' is seen as constructed by patterns of social interaction. However, the process of norms adoption in international relations is conditioned by behaviours of states, international organisations, and activists (Finnemore and Sikkink, 1998). In the following, I will mainly focus on positivist international relations theories, as they particularly adopted in the Nile scholarship to explore the dynamics of the Nile Basin interactions and transboundary water management challenges, as explored in this dissertation. However, I will also take constructivist thoughts into account whenever they seem particularly suitable to the analysis.

3.2.1 Impetus to cooperation

Anarchy is a determinant of the international system according to realist and liberal assumptions, and it is combined with limited resources. These two determinants define the state's behaviour in the international arena. Accordingly, the conduct of the state is such that it is expected to cooperate with the other states to encounter environmental challenges under the conditions of anarchy and limited capabilities (Niou and Ordeshook, 1994; O'Neill, 2009; Kütting, 2013; Thomas, 1992). In case of non-cooperation, realism assumes that the state loses its power and then its national security is threatened; while liberalism argues that the state is not able to get its prospective absolute gains (Jervis, 1999; De Coninck and Bäckstrand, 2011).

According to neoliberalism, absolute gains are achieved through collective arrangement, which is a founding way to cooperate effectively for the long term (Niou and Ordeshook, 1994: 209-214). As regards the aspect of environmental challenges, neoliberalism assumes that all states in the

international system have been suffering from similar impacts of environmental challenges. When they cooperate, however, they attain absolute equal gains.

For neoclassical realism, relative gains are a fundamental factor in analysing cooperation. The state decides whether to cooperate or not according to its capabilities and willingness to allocate resources for collective mitigation and adaptation of international strategies. Moreover, the notion of relative gains is suitable for the nature of environmental challenges because the returns of mitigation policies take time and infer costs. Therefore, the involvement in cooperation secures its relative gains (Purdon, 2014: 309).

Under a system of anarchy, both realism and liberalism assume the state is a rational actor. The state defines its preferences and behaviours to cooperate or to take conflict actions to maximize its resources (Niou and Ordeshook, 1994; O'Neill, 2009). The state may choose for cooperation because it attains prospective gains (Kütting, 2013). In this regard, some theorists of neorealism justify state cooperation by the status of hegemony when a hegemonic state can force other states to cooperate to secure stability in the international system. Nevertheless, the reality of establishing cooperative arrangements to deal with global environmental change has not been enforced by a hegemonic power that had used its tangible resources. The state projects its structural power inside the international institutions, and this is reflected in the process and priorities of arrangements. Regarding the rational choice explanation; the required inputs to prefer cooperation as a rational decision are not necessarily available for states. Additionally, there are other complications, where changeable inputs are generated by internal forces and affect the decision (Kütting, 2013).

Furthermore, Niou and Ordeshook (1994: 224-226) refute the realist rationale of maximizing resources when they explain the status of equilibrium in an anarchic international system. The state obtains its relative power in the international order; therefore, it aims at relative and absolute gains. So, the equilibrium status entails competitive and cooperative behaviour, this enabling it to sustain this status. On the other side, there are non-rational factors, such as subjective beliefs, time of events, and the way to practice its intentions; and given that, the state attempts to maximize its welfare, not power (Niou and Ordeshook, 1994).

According to constructivism in international relations, state interests are formulated by normative assets such as ideas, identities, and knowledge. Therefore, state power is measured by its persuasive capability and its ability to influence others, not only by its physical capabilities underlying realist and liberalist assumptions. In other words, the ideas and values of the state affect its way of using tangible powers towards other actors in the international system (Wendt,1995; Hopf, 1998:175-178).

Regarding collective action, cooperation between states is a result of the diffusion of values and principles. Agents identify their interests after formulating a collective meaning about their contexts. The consequent practices regenerate norms and values which maintain or change the collective meaning. Institutions in this regard are a space where agents can share their perceptions and then convert them to general norms and rules (Hopf, 1998:189-190; Finnemore and Sikkink, 1998).

The environmental impacts transcend the territorial borders of the state and the technical mechanisms for mitigation exceed the capacities of the state. Therefore, according to classical theories, the sovereign state cooperates because mitigating the environmental threats reflects on its national security and allows it to benefit from the resources. Given these assumptions, the Egyptian cooperation behaviour has been explained as attempts to secure its interests in the Nile waters (Zeitoun and Warner, 2006).

Nevertheless, the constructivist view of international relations, i.e. a focus on norms and identity, are highly contested in Nile politics and are not persistent to constitute shared values, knowledge, and meaning across the Nile Basin. Namely, the principles of equitable utilization and no harm are contested between the downstream and upstream countries. Similarly, there is no agreement on the definition and boundaries of equitable distribution at the domestic level among economic sectors. Additionally, the institutions (e.g. the river basin organisations and legal agreements) have reflected the contested national interests of the riparian countries, and could not promote and legitimize these principles in the Nile Basin (Beyene, 2004; Yohannes, 2009). The next chapter will demonstrate the contentions over water shares and the emergence and fall of the river basin organisations.

3.2.2 Perimeters of cooperation

According to realism, states will not continue to cooperate once they have attained their prospective gains. The neoliberal view, however, is that institutions pledge their sustained cooperation (Jervis, 1999; Purdon, 2014).

Sustainable international cooperation is a fundamental assumption of neoliberalism. The source of sustainability is generated from the state's preference to minimise the transaction costs of international interactions and that is why the state is open to receive and acknowledge changes in the other states' preferences and situations. Under this condition, the state prefers to be involved in a collective arrangement where it can predict and manage changes (Jervis, 1999; Gomes, 2012). In other words, the existence of the institution constrains the state self-interest as an ultimate goal. Moreover, generated information and knowledge inside institutions play a role in empowering institutions as a frame of collective arrangement (Jervis, 1999).

In the realist perspective, engaging in an institutional arrangement does not guarantee cooperation in the long run. Furthermore, introducing new information into a cooperative framework does not change state preferences because the state's decision of engagement is based on maximizing gains. Accordingly, institutions are there to dominate and practice power and attain benefits. This realist view explains why some international institutions are not sufficient as standard tools to achieve the state's goals. It might be deconstructed when their function is completed or confined to merely sharing information without consolidating mutual trust among members (Jervis, 1999). Another viewpoint privileges the international power distribution for ensuring control over the effectiveness of institutions. For example, powerful states employ institutions as tools to lessen their responsibility through diffusing it with the other states or a sphere to project power and hegemony in the international system (De Coninck and Bäckstrand, 2011).

In light of the classical theories, the environment is framed in a dualistic relation with national interest. The changes in the environment and their consequences have been theorized as a risk to the stability of economic and political systems (Cudworth and Hobden, 2013). To avert this

potential challenge, the state and intergovernmental organisations (institutions) act in cooperation mode as long as their interests are maintained. In Nile politics, the prevailing analysis resonates with the contestations over CFA and GERD, for instance, to attain the national interests of Egypt as a downstream country as opposed to the upstream countries.

3.3 Complexity and international relations

Environmental challenges are uncertain as regards occurrence and impacts. Therefore, mitigation interventions have entailed complex analyses of the causes, motions and potential impacts of ecological impediments.

Given this fact, a critical challenge to international relations theories is that complexity endorses relationality that refutes the notion of a structured/stable system. The dynamics of interactions lead to alteration of structure (somewhat similar to some constructivist notions of power changes), so it is not stable or closed, as assumed in classical international relations theories. Therefore, in the complexity paradigm, many entangled structures/systems are in motion and interlocked with other systems.[10] As a result, there is interdependency in structures' configurations and reproductions (Cudworth and Hobden, 2013). In other words, there are extraordinary ecological events that occur in the international system and causality thinking does not provide sufficient explanations of these events. Therefore, the complexity lens envisions political realities 'as emerging from interactions among interdependent but individual agents within evolving institutional formations' (Harrison, 2006a:2).

Furthermore, the complexity paradigm intends to explore the various factors that affect the dynamics rather than determining specific factors or assuming zero impact of factors, to investigate

[10] Cudworth and Hobden (2013: chapter 3) elaborate on the convergence and divergence between their account of complexity and theories of international relations. The argument of the influence of the international system on the state's behaviour as coined by Kenneth Waltz (neo-realist school of thought) intersects with complexity thinking about the impact of system interactions on changing actors' behaviours. Additionally, the pluralist approach to international relations meets the complexity analysis in considering the multilateralism of actors and levels in the analysis. Similarly, the integral role of capitalism in analysing international politics as developed by neo-Marxist theorists, interlinks with complexity thinking when including economic interaction with one of the other subsystems which co-evolves through international interactions.

a social phenomenon. This is unlike the prevailing social theories that interpret interactions and power relations within the frame of a closed system to control the influence of factors/conditions which entail, on the other side, reductionism of analysis. However, complexity means to claim the intersectionality among various agents and across levels or micro-systems (Cudworth and Hobden, 2013; Harrison, 2006a).

On the other hand, reality is complex and uncertain conditions surround the policy process due to global changes. Thus, scientific investigations are incompetent to produce complete information and knowledge. Harrison explains that

> 'In complex systems, problems are unclear, solutions have uncertain effects, and points of leverage are never simple. But complex systems can be pushed and prodded, and changed; yet, caution is required and instruments are imprecise. Because institutions and social systems are influenced by human perceptions of the world and how it works, dethroning the rational choice paradigm is the best way for scholars to positively influence world politics.' (Harrison, 2006b:192)

Harrison (2006a) argues that alongside the uncertainty of global challenges, the state itself is composed of multiple systems. The interactions among individuals and groups configure the institutions and practices of the state.

In other words, the economic and social systems interact with their counter-systems in other states, hence the description of the state as an 'open system'. Due to this openness, the changes and reconfigurations can be caused by various factors, not only domestic or external factors as proposed by classical international relations theories. In the complexity perspective, there is no determinism and actors' behaviours are reconfigured according to any factors that influence the system. Therefore, Harrison (2006a), together with Cudworth and Hobden (2013), refutes the cause-effect interpretation of dualism as portrayed in classical international relations theories because causation is not sufficient to explain structural interactions due to the constant reconfiguration process. Additionally, historical, internal and external dynamics prompt the states (as agents) to situate and voice their interests, which in turn reformulates the structure.

Similarly, sub-systems influence the system and set it in motion because the behaviours of agents cannot be predictable or consistent with the rational calculations of the other agents. Conversely, the interests and identity of agents are relative and continuously adapting to the situation they experience. From this perspective, minor events can cause change or influence the structural configuration of the relationship between agents and subagents (Harrison, 2006a).

The complexity account as presented by Cudworth and Hobden (2013) and Harrison (2006) challenges the assumptions of realism and liberalism. However, their arguments intersect with the constructivist analysis of international relations. Mainly, both complexity approaches and constructivism understand the international system as a result of 'coevolution' of entangled sub-systems (e.g. economy, social, and culture)[11] and actors' interests, ideas, and values. Importantly, actors' behaviours are socially constructed where both domestic and external situations influence them as well as actors' actions contribute to changing international politics.

The analysis in this dissertation is based on the approach of complexity thinking, and precisely the relational analysis and network concepts, as shall be shown below. On the one side, this way of approaching international politics does not put the binary division of cooperation and conflict as the end purpose of international relations analysis, like the classical theories and constructivism do (e.g. Wendt's argument of collective security). In contrast, relationships among actors are the emphasis of the analysis. One the other hand, applying the relational and network approaches helps to avoid some critiques to constructivism in international relations.

The first critique is about the state which is a central and unitary actor in Wendt's account. He has explained that the state is an 'organisational actor' that involves social dynamics but by the end, the state represents one identity in international dynamics (Wendt, 1999: chapter 5). By comparison, complexity thinking assumes that individuals have their ideas and values which are adaptable to surrounding situations, and they are not necessarily dissolved into one identity of the state (Harrison, 2016a:9-10). Furthermore, Weber (2007:98) argues that unlike Wendt's account, social constructivism allows the inclusion of different actors, i.e. civil society and corporations in

[11] Cudworth and Hobden (2013) affirm that ecology (non-human system) is not an exogenous subsystem; instead, it is an integral part in the coevolution process that shapes international relations.

analysing international dynamics. Therefore, in this dissertation, civil society entities (e.g. organisations, initiatives, and movements) constitute the unit of analysis. The network concept of nodes facilitates demonstrating the actor's relationships with the state, companies, donor agencies and their peers of civil society. Chapter five will show the diversity of relations of civil society in the three countries. Additionally, chapter seven will explain through four case studies how the values and interests of civil society actors are adaptable to international and domestic changes; finally, it will reveal how values could be divergent from the nation-state identity.

The second critique concerns normativity in the constructivist understanding of the emergence of norms and principles in international relations. Constructivists discuss the role of non-state actors by advocating for norms as ideals, mainly in discussing global challenges. Haas (2002:75) argues that the participation of civil society actors in UN conferences on the environment has led states to adopt 'ecological integrity' as a norm and to establish global environmental governance. Similarly, Finnemore and Sikkink (1998:898-899) contend that civil society plays a significant role in emerging and cascading new norms in international politics. Civil society organisations (e.g. the Red Cross, the women's rights organisations, and environmentalist networks) advocate for global norms utilizing intergovernmental organisations as a space where to interact with state actors. Subsequently, they drive states to apply the new norms at the national level. Morality, altruism, esteem, and legitimacy are among the motives and tools to persuade state actors to conform to the new norms.

In this regard, this dissertation builds the analysis beyond the normative role of civil society actors as explained in chapter two (see section 2.2.2). Definitely, norms and identity shape the actions of civil society, but that does not mean their norms and ideas are in pursuit of a collective vision for Nile governance, as will be shown throughout this research.

In addition to state centrality and normativity critiques, constructivism as well as classical theories exclude non-human actants (animal and plant species) from the analysis (Cudworth and Hobden, 2013). However, Barder (2020) argues that actor-network theory corresponds with constructivism in terms of focusing on the actor's entangled relations. Additionally, constructivism considers interactions between tangible capabilities and social dynamics. According to the actor-network

theory, non-human actant can influence the constituted relationships around it; accordingly, it can change the behaviours of the other actors in the network. Therefore, Barder (2020) suggests actor-network theory as a methodology for constructivist analysis. He claims that actor-network theory is 'an empirically driven process of tracing connections in order to illustrate how a variety of actants interact, form networks, and crystallize into what we observe as ‘stable’ sociological structures' (Barder, 2020:45).

Accordingly, this research is built on the centrality of the Nile either as a given natural resource to riparian countries or embedded in the culture of peoples and communities that motivates them to organise themselves and constitute entangled relations with the Nile River according to their social reality and interests.

3.4 International relational politics

The dynamics in the Eastern Nile Basin portray co-existence of cooperation behaviours represented in the NBI and the bilateral interactions and contestation over the CFA and GERD. Furthermore, the voice of the sovereign states is not the only narrative, and it is combined with the engagement of international and regional intergovernmental organisations. Importantly, civil society activists and practitioners, as well as researchers, have been involved in Eastern Nile politics.

Hence, contrary to the premise of classical theories where the actor (state) constitutes international relations, and its power defines behaviour, Eastern Nile hydropolitics depicts the involvement of other actors that influence the dynamics in the Eastern basin. As a result, Eastern Nile politics can be framed in a relational perspective. The relational thinking believes the relations are the substance, not the entities themselves. In other words, what formulates the relationship (culture, identity, material, discourse) defines the entities’ behaviour to each other and simultaneously, affects the objects themselves (Kurki, 2019). Therefore, McCourt (2016) frames relationalism (together with practice theory) as 'the new constructivism', because it developed from constructivist thinking. Moreover, relationalism allows inclusion of social and cultural dynamics

in the analysis of international relations without negating material capabilities. Additionally, relationalism broadens the constructivist lens by focusing on relationships instead of the binary division of structure and agency.

Emirbayer (1997) and Kurki (2019) state that the relational thinking delves to discover what lies beyond the 'observable objects', because objects do not control the substance/power, but the relation that connects them. On the other hand, the prediction of behaviour is derived from calculating substances, interests, goals and capabilities. As a result, entities themselves do not designate the political scene, but instead their interactions, which influences their content and the whole structure. Thus, it is not a one-directional relation, but constitutes reciprocal interaction.

Another dissenting assumption from classical theories concerns rational choice. According to international relations theories, the rational option of actors means that their interests are determined in advance, and they are static, dissimilar to international relations theories in which norms and ideas are paramount. Therefore, behaviours are generated from the substance of actors, either self-interests or self-norms. In light of this scope, Emirbayer (1997) describes behaviours as 'inter-actions' with a hyphen. He argues,

> 'The variable based analysis (as in the interactional perspective) is an equally unviable alternative; it, too, detaches elements (substances with variable attributes) from their spatiotemporal contexts, analyzing them apart from their relations with other elements within fields of mutual determination and flux'. (Emirbayer, 1997:288)

So, in the framework of the classical theories, the actors and their features and capabilities are defined first, and then their behaviours follow in a causation format. However, in the international relational approach, substantive power, interests, norms and even identities are generated based on motion and relations, which are in a process all the time and across various spaces. In Emirbayer's words:

> '(…) the transactional approach is that it sees relations between terms or units as preeminently dynamic in nature, as unfolding, ongoing processes rather than as static ties among inert substances.' (Emirbayer, 1997: 289)

As far as the premise of relations is concerned, the context, where the actor moves, is decisive. Kurki explains:

> 'It does so particularly effectively by emphasizing that we of course only know of the world around us from our situated perspectives but also that our situated perspectives are conditioned by our natural and social legacies which constrain and limit our perspectives.' (Kurki, 2019:73)

Therefore, situatedness defines an actor's position in the relations according to the distance from other actors and simultaneously, it calculates the opportunities and limitations of the situation. Emirbayer states that 'individual persons, whether strategic or norm following, are inseparable from transactional contexts within which they are embedded' (Emirbayer, 1997:287).

In the same vein as the previous arguments of Emirbayer and Kurki who theorized relational thinking, Qin (2016:35-38) articulates the network approach from the international relational perspective. He argues that the power lies in 'interrelatedness' that is configured between various entities in the network and, importantly, is affected by and influences the context. Therefore, relational dynamics define the network rationality of motions rather than the 'absolute rational mind' of the actor. Therefore, rationality is taken according to calculating the relations that the actors are involved in, after which the behaviour can be assessed as rational or not, and so it is more than 'instrumental rationality' or 'normative rationality'.

Moreover, because of 'actors-in-relations', the network structure reconfigures the actor itself by redefining the roles, values and norms, which in turn can lead to start a new network or abandon the present one. And through processes and reconfigurations occurring in the network, power is shaped; so it is a relational power that entails both tangible and intangible substances. Accordingly, the actor's power is identified by holding multiple or limited relations, not by the hard or soft capabilities that the actor retains or lacks. And the rationality of actors is to avail their relations by

expanding the network or starting new networks, after which they become dominant because they are the centre (ego) of different networks or the original one and can benefit from other actors. Therefore, being in the centre of relations is more significant than holding material capabilities (Qin, 2016).

3.4.1 Power(s) in the network society

Emirbayer and Kurki demonstrate the relational thinking to theorize social interactions, while there are studies that elucidate the relational reasoning from an empirical perspective.

Coward (2018) describes the network as a metaphor that prevails in theoretical discussions, and has become a present-day methodology in which Social Network Analysis (SNA) is applied to explain relations. The network metaphor has evolved as a result of connectivity innovations starting from materials such as infrastructure and communication devices, and then information technology, that influence the global political economy. He explains that 'the network is not simply a category of analysis, but also an everyday concept constitutive of thought and action and thus, the practices of global politics' (Coward, 2018:450).

Furthermore, Coward (2018:452) points out that the essence of the network lies in the relations rather than the actor itself. Therefore, relationships are not stable, because actors move to create, deconstruct or maintain relationships, and according to these multiple relations, the actor can gain or lose power. Additionally, these motions are not bounded, so the network is 'post-territorial'. A prominent scholar in the field of network analysis is Castells, who has developed his concept of network society based on various case studies across global and national levels.

Castells (2010, 2016) argues that the network society embarks on capitalism by connecting and speeding up production around the globe with capital accumulation due to advanced technology. As a consequence, both production and organisation have been in the process of reconfiguration and therefore, the global economy became complex as 'a network-based social structure is a highly

dynamic, open system, susceptible to innovating without threatening its balance' (Castells, 2010:501-502).

In his analysis, a network is defined as the connectedness between entities (nodes), and each field consists of networks. In general, the nodes are connected with other nodes that could be positioned in the same network or an external one. Furthermore, the connections between nodes could be intense and frequent or rare or absent, with all of these dynamics defining the network(s) (Castells, 2010).

In the vein of advanced information technology and a complicated global economy, people's culture has also been reconfigured to become more autonomous. In the network society, individuality and autonomy are the principal doctrines, where people can move and act beyond national borders. In other words, people are not assembled at the local level as they used to be in the frame of cooperatives, to be able to take collective action. Instead, they engage in different networks across spaces under the prevailing narratives of 'networking' and 'outsourcing' to increase their opportunities of engagement in the global capital network (Castells, 2010).

So, Castells addresses these capitalist and cultural dynamics in the network society as follows:

> 'The social construction of new dominant forms of space and time develops a meta-network that switches off non-essential functions, subordinate social groups, and devalued territories. By so doing, infinite social distance is created between this meta-network and most individuals, activities, and locales around the world. Not that people, locales, or activities disappear. But their structural meaning does, subsumed in the unseen logic of the meta-network where value is produced, cultural codes are created, and power is decided.' (Castells 2010:508)

However, in the network society, there is a confrontation between these dynamics. People who act independently from the network, are empowered to engage in transboundary collective action. Capitalizing on their technological development, various actors have become able to challenge the capitalist process, particularly policies that are formulated and decided on the global level, and not by national organisations. On the other hand, the exercised power of the state's bodies has been

changed because of networking with other actors, either governmental at global or regional levels and with non-governmental actors (Castells 2016).

Regarding the matter of power in the network society, Castells (2016) argues that because technology and information have been consolidated in different forms of economic production, consumption and culture dynamics, persuasive power has been exercised more than coercive power. From this understanding, he coined communication power to define the power that flows in complex relations in the network society. Nonetheless, he scrutinizes it into different forms to be compatible with the idea of multiple interactions among various actors in the network society. So, he defines four types of power starting from the overarching form, continuing on to the power of involved actors in the network: 1) networking power; 2) network power; 3) networked power; 4) network-making power. Both networking and network power are related to the capability of the network as one among other global networks.

The networking power is revealed when the network has a significant position in global networks. Accordingly, actors who are involved in this network are connected to the higher level of decision makers who formulate comprehensive policies. Moreover, some of the involved actors play the role of 'gatekeepers' to maintain the centrality of their network and exclude other networks that do not carry benefits for them.

Network power is about the 'protocols' that regulate the dynamics among the actors in the network. Treaties and agreements, particularly in financial areas, trade and markets, are examples of these protocols. However, these protocols are developed by influential actors who create the network, and these rules are the defending mechanisms to exclude or invite other actors from or into the network. Accordingly, separable networks as components of the 'network society' exercise power to retain their positions on the global level.

Networked power is about the power relations inside the network according to the objective of forming a distinct network. However, the network's aim is defined by the capabilities of its nodes. So, if there is an actor who has more competences than the others, then this actor influences the relations inside the network.

Network-making power is about proceeding relations in the network and across networks. This power is generated from creating networks and defining their objectives with the flexibility to reformulate the network to attain its interests. At the same time, actors of the networks are in connection with the other networks, which can be competitors for them. Therefore, actors attempt to establish relationships with other networks, particularly those that have common interests and can generate mutual benefits.

The actors who make the power of the network in terms of vibrant objectives are 'programmers'. They play the role of creating a network based on convinced interests; importantly, they are aware of the changes in milieus, so they react by modifying and reconfiguring the network's objectives.

On the other side, networks encompass actors who perform as 'switchers' by creating relations between their network and the other ones to maximize their benefits. The ties between scholar and business networks are an example of generating power by assembling economic gains based on science and knowledge.

Castells articulates a significant explanation from this form of power 'network-making'. He claims that

> 'A central characteristic of the network society is that both the dynamics of domination and the resistance to domination rely on network formation and network strategies of offense and defense, by forming separate networks and/or reprogramming existing networks.' (Castells 2016:14)

Because of that, two dynamics of creating networks are conformed: one being unleashed to give the network distinct features to gain a central position among various global networks; which could lead to being a hegemon in the field of interest. And the second formulation is developed due to rapid information technology and autonomy of actors so that they can challenge the dominant networks, or at least collaborate with them, although that implicitly requires reconfiguration of the initial objectives of the network.

3.4.2 The implications of the network approach in international politics

Based on empirical studies, Sikkink (2009) concluded that the types of networks in international politics take the form as a structure or an agent network. The latter emphasises the characteristics of actors who formulate the network and aim to fulfil their interests by joining a distinct network. Therefore, they influence the network's relations. The former frame, the structure, reflects networks that are generated due to regulations such as treaties. In that case, the actors can adjust the network. Furthermore, the cases of networks in the international arena depict the correlation between the nature of the network and the situation as regards which actor has a central or hegemonic role inside the network. Examples of this are human rights networks and civil society organisations.

Regarding the dynamics of the network, in violent networks (e.g. terrorist networks) the interactions among actors are minimal and conducted in a secret way. On the contrary, advocacy networks strive to enlarge their connections to reach out for their causes and gain support.

Furthermore, the force of advanced technology, as Castells (2016) has explained, induces global interdependence and networking. Therefore, governments have become attracted to formulating networks as a tool of 'delegation'. Empirical studies indicate the state delegates competences to professional networks to perform the task of policy harmonization. A remarkable delegation is when the state designs a network, including NGOs, in pursuit of delivering and implementing public service projects.

Sikkink (2009) points out general features of networks in the international arena which are: the network is formulated by the free will of its actors which in turn gives the founding actors the capability to regulate and decide who can join or disregard it (networked power in Castells's argument). The network's relations are constructed on the basis of the flow of information that actors exchange in their interactions. However, the effectiveness of reciprocity means there is a bottom level of trust among actors and that is why they joined the network and agreed to share

their knowledge in the first place, which forms part of their capabilities. Additionally, mutual trust among actors induces collective action and extends connections with other networks.

Hafner-Burton et al. (2009) argue that the network approach enriches classical international relations theories that are characterized by a systematic design where the notions of power and balance of power are the dominant factors in analysing relations in the international system. From the network perspective, the position of actors inside the complex of relationships and the dynamic of relationships identify the opportunities and constraints that affect actors' behaviours towards international issues. Regarding the notion of power in the network perspective, power is located in the interactions among actors and not in the actors' capabilities per se, like realist theory assumes. Therefore, 'network power' is generated from the distribution of actors' positions inside the complex of interactions. On the actor level, actors may use their capabilities to maximize the gains of their position in the network. Due to the fact that network analysis and international relations are a web of interactions that are changeable over time, actors change their behaviour accordingly, which reshapes their relationships.

Furthermore, the state behaviour in the intergovernmental organisations can be analysed from a network perspective. International governmental organisation is a network where the state has a position in the network which has evolved among states inside the institution. Each state uses its 'relative position' in the network(s) to maximize its gains, e.g. to enlarge its alliance or trade benefits. Furthermore, being part of a network in an international governmental organisation creates social relations where states can share beliefs and norms, which are then reflected in states' behaviour. Therefore, the network approach provides a framework to investigate both cooperative and antagonistic behaviour taken by the state according to its calculation of its relative position within the network(s) (Hafner-Burton and Montgomery, 2006).

Another implication of the network is driven by global problems and crises that have challenged states' capabilities to encounter cross-border problems. As a result, these problems have driven the states to become part of networks, to be able to mitigate global challenges. For that reason, the state compromises its sovereignty and creates or joins various networks internationally and internally. The membership of international and regional organisations provides a space to build

networks. Additionally, participating in global summits is a way to mobilise coordination regarding pressing challenges. Internally, the state creates networks with other actors in the political system so that they can participate in the decision-making process and share the responsibility of mitigating challenges. However, the inclusion of other actors enhances the legitimacy of the state and in this regard, the state is called the 'network state' (Castells, 2008:88). Similar to this argument is that of 'network-based structures', when the level of coordination and cooperation among governmental bodies is increased to mitigate problems. In the view of the network state, the classical perspective of state power and sovereignty over citizens is retracted because network practice requires information and authority diffusion to attain effective policies (Schneider et al., 2003).

However, the network perspective of managing global problems has embedded challenges that affect its efficiency. Internally, the network model allows competitive behaviour among the state's bodies and other actors who seek to enhance their power and position within the state structure. Hence, they underrate the required coordination for effective policies. In international and regional governance networks, however, the obstacle comes from the perception of the state as part of the network. Usually, the state considers the network as a space to negotiate with the priority of maintaining its sovereignty, national interests and position, and not as a space to share responsibilities for improved mitigation of global problems. As such, the majority of global governance networks are unsustainable networks (Castells, 2008).

Moreover, the framework of the network perspective has been applied to the development sector, because it facilities the process of decision making and collective action. Building trust among stakeholders through sharing information and resources can enhance the effectiveness of development policy and, on the other side, attains a mutual commitment regarding the agreed policies among stakeholders (Schneider et al., 2003).

Development practitioners have also paid attention to analyse the role of stakeholders in planning, implementing and evaluating development projects. Stakeholder analysis focuses on the attributes of actors to build a map of actors' interests and assess to what extent they are matched or contradicted, and how actors' competition over resources has defined their behaviour and the

policies of managing development projects. Thus, the term stakeholder implies a powerful actor who has interests to intervene and defends its interests in implementing a development project. According to the level of power, the stakeholders are categorized as between primary actors and secondary actors, influential actors and subordinated actors (Grimble and Wellard, 1997).

From the perspective of the network, development is the pursuit of change, which helps to investigate the social learning process of the network members. This is because the behaviour of actors is affected by the pattern of relations inside the network. When actors take collective action, they share their interests, objectives, knowledge and techniques, and through that, a social learning process occurs genuinely. This social learning process is essential in examining and initiating participatory and adoptive resource management (Prell et al., 2008).

3.5 Preliminary conclusion

This chapter has attempted to demonstrate how environmental challenges are addressed in the international relations theories. Conventional international relations theories (realism and liberalism) articulate the cooperation impetus to mitigate environmental challenges; however, the principle of national interest can impede sustainable international cooperation. By comparison, the relational thinking of international relations is based on complexity of interactions. Capabilities, norms, and interests are defined according to changing context. Given that, in network society actors exert power differently. They do not rely only on their tangible capabilities; rather, power is revealed in creating networks, regulating interactions inside the network, or in connecting across networks.

The Nile as a transboundary natural resource is addressed in regional water governance as one unit. Because the natural and human-induced impediments transmit from one part to another in the Nile Basin, the riparian countries adopt cooperative behaviour to maintain their interests in utilizing the Nile resources. Furthermore, the discourse of global environmental challenges has consolidated the necessity of cooperation in their international relations. Despite prospective cooperation in governing the Nile River, the vision of the one water unit embeds complex

interactions where development and political priorities are entangled with communities' aspirations, besides accelerated ecological changes. Therefore, cooperative relations among the riparian countries have not reflected linear progress in governing the Nile waters. Moreover, cooperation and conflicting behaviour have co-exercised in these countries, particularly in the Eastern Nile Basin. So, analysing the interactions in Nile governance requires a different perspective that entails the complexity of relations. Therefore, the relational perspective underpins interlocked natural and human interactions as well as regional politics in the Nile Basin.